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"I Felt I Was Reaching a Point with My Health": Understanding Reasons for Engagement and Acceptability of Treatment Services for Unhealthy Alcohol Use in Primary Care

Megan A. O'Grady[1], Joseph Conigliaro[2,3], Svetlana Levak[2], Jeanne Morley[2,3], Sandeep Kapoor[2,3], Melanie Ritter[2], Christina Marini[4], and Jon Morgenstern[2,3]

Abstract

Introduction/Objectives: Despite increasing need, there are large gaps in provision of care for unhealthy alcohol use. Primary care practices have become increasingly important in providing services for unhealthy alcohol use, yet little is known about the reasons patients engage in these services and their views on acceptability of such programs. The purpose of this study was to examine primary care patients' reasons for engagement, experiences with, and acceptability of a primary care practice-based program for treating unhealthy alcohol use. **Methods:** This qualitative study was conducted in a primary care practice that was developing a collaborative care model for treating unhealthy alcohol use in primary care. Semi-structured interviews were conducted with 24 primary care patients. Data were analyzed using conventional qualitative content analysis. **Results:** Findings suggest that patients engaged for both internal (concerns about drinking and health) and external reasons (family or provider concern). Patient experiences in the program were shaped by their affective responses (enjoyable, enlightening), as well as therapeutic benefits (gaining new insights about drinking; staff/provider support). Acceptability was driven by core program elements (medication, therapy, integration) as well as positive impacts on drinking cognition and behavior and flexible, patient-centered approaches. **Conclusions:** Offering flexible and comprehensive programs with mutiple elements and both abstinence and moderation goals could also improve patient engagement and views on acceptability. Primary care practices will need to be thoughtful about the resources needed to implement these programs in terms of staffing, training, and program support.

Keywords

hazardous drinking, primary care, qualitative methods, collaborative care, screening and intervention

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Alcohol consumption and use of alcohol-related acute care have increased in the United States over the past 2 decades and the number of alcohol-related deaths per year has doubled during this time.[1] National data suggests that of the over 140 million current alcohol users in the United States, 47% exceeded recommended per occasion drinking amounts and one-quarter of those individuals did so on 5 or more days in the past month.[2] Approximately 14 million adults in the United States meet criteria for alcohol use disorder (AUD).[3]

Despite increasing need, large gaps in providing care for unhealthy drinking persist. Most individuals with unhealthy alcohol use (UAU) receive no clinical care.[4] UAU is defined as a continuum of behaviors from risky or harmful use (exceeding recommended daily, weekly, or per occasion amounts) to AUD.[5] Only about 1 in 6 binge drinkers are

[1]University of Connecticut School of Medicine, Farmington, CT, USA
[2]Northwell Health, Manhasset, NY, USA
[3]Zucker School of Medicine at Northwell/Hofstra, Hempstead, NY, USA
[4]Partnership to End Addiction, New York, NY, USA

Corresponding Author:
Megan A. O'Grady, Department of Public Health Sciences, School of Medicine, University of Connecticut, 263 Farmington Avenue, Farmington, CT 06030-6325, USA.
Email: ogrady@uchc.edu

asked about alcohol use and advised to cut down by a health professional[6] and less than 10% of individuals with AUD receive treatment.[3] Even when patients are being routinely screened for UAU, few who screen positive receive recommended care as part of standard clinical practice.[4]

Primary care practices (PCPs) play an increasingly important role in providing care for UAU.[7-11] The U.S. Preventive Service Task Force recently renewed their recommendation that adults be screened and provided a brief intervention for UAU in PCPs.[5] Such screening and brief intervention (SBI) models in PCPs have been shown to reduce alcohol use among people who are not dependent on alcohol.[12,13] In addition, models of care that also address those with more severe alcohol use are being developed and tested within PCPs.[14-18] These models tend to utilize care management or collaborative care approaches that provide patients with ongoing care coordination, pharmacotherapy for AUD, and evidence-based therapy using multidisciplinary teams. Results have been mixed in randomized trials testing these models. Notably, even in studies with positive outcomes, initial engagement and sustaining patients in ongoing care (eg, therapy sessions and clinic visits) was challenging.[9,15,17]

Providing AUD care in PCPs differs from specialty treatment settings because patients may not be seeking treatment for AUD, may not be aware that such care is available within their PCP, or may be surprised when they screen positive on a universal screen conducted during a routine PCP visit. Recent studies have found that patient-level characteristics (eg, demographics, stigma) are related to engagement in substance use disorder (SUD) care in PCPs.[9,19] These findings suggest that reasons for engagement and acceptability need to be better understood to improve interventions and their implementation. As integration of AUD treatment within primary care continues to be developed, tested, and expanded, additional studies are needed to learn how to best engage patients and understand how acceptable they find services to ensure that these services can be implemented and sustained effectively.[20]

Several systematic reviews have shown that patient views are rarely evaluated in integrated care programs.[21-23] However, patient evaluations of treatment programs play a substantial role in predicting AUD treatment outcomes and should be more frequently considered.[24] Patient perspectives are needed to identify strategies to improve outcomes and inform implementation of treatment for UAU in PCPs.[25,26] While staff and provider views of implementing SUD screening and care in PCPs have been explored fairly extensively;[27-30] there are limited qualitative studies that examine patient perspectives of UAU programs in PCPs, especially those that examine patients' real-world experiences in receiving this care. Of the few qualitative studies that have focused on PCP patients, they have mostly focused on SBI rather than expanded care models.[8,28,31-35]

This study will address these gaps in knowledge by examining patient perspectives and experiences in a care program for UAU in a PCP using qualitative methods. Specifically, we assess reasons for program participation and program acceptability (ie, perception that the program is agreeable, palatable or satisfactory). Understanding reasons for participation and program acceptability can contribute to future research and implementation efforts of programs for UAU in PCPs.[36,37] The program under examination in this study is Project ReDUCE (**Re**ducing **D**rinking **U**sing **C**ollaborative **E**fforts), a collaborative care model to treat UAU in a PCP. Three research questions guided this study: (1) What were the reasons patients participated in ReDUCE? (2) What were patients' experiences in ReDUCE? and (3) How acceptable did patients find ReDUCE?

Method

Design, Setting, and Study Procedures

The current study was conducted as part of a larger project to develop and test Project ReDUCE, a collaborative care model to treat UAU in a PCP. The data examined in this study was collected as part of an initial feasibility phase in which the collaborative care model was adapted and implemented in a PCP.

The study was conducted in a Level 3 Patient-Centered Medical Home (PCMH) in the Northeast that has approximately 32,000 visits per year. The practice has an ongoing screening, brief intervention and referral to treatment (SBIRT)[38] program in which every patient is screened for risky alcohol use using the AUDIT-C screening tool[39] at each visit and connected with a PCP-based health coach for follow-up if they screen positive. Study recruitment was conducted predominantly via the SBIRT program such that during SBIRT procedures, PCMH health coaches identified potential participants and offered them the opportunity to participate. In addition, patients identified by practice physicians during routine visits could be referred. If interested, participants were consented using a written consent procedure and then completed additional measures to further determine eligibility and alcohol use severity (eg, Timeline Follow Back for the past 60 days, the Composite International Diagnostic Interview-Alcohol Module). Patients were eligible to participate if they regularly received care at that PCMH. They also needed to (1) have estimated weekly alcohol consumption of greater than 14 drinks (men) or 7 drinks (women) or at least 1 binge drinking day per week; (2) demonstrate observable fluency in English; and (3) have no recognizable cognitive impairment. Twenty-six patients were enrolled; 2 were lost to follow-up, leaving 24 participants in this study.

Core Program Elements

Eligible participants were initially classified into 1 of 4 groups that determined the treatment options they would be offered (see Table 1): (1) At-Risk Drinkers (AR); (2)

Table 1. Drinking Classification and Treatment Offering.

Drinking classification	Criteria	Core elements of treatment[a]
At-risk (AR)	>14 SD men or 7 drinks/women per week; or binge drinking defined as > 5 SD/men or > 4 SD/women per day	SBIRT plus ongoing monitoring by PCP
Problem (PD)	≥24 SD/men or ≥ 14 SD/women per week; regular binge drinking defined as > 5 SD/men or > 4 SD/women per day at least > 3 times per month	Choice of either 4 sessions of Motivational Enhancement Therapy or 12 weeks of daily naltrexone with medication management
AUD with physiological withdrawal (AD-W)	Met DSM-5 AUD criteria with physiological withdrawal	Offered outpatient detoxification as part of standard PCP care, unless contraindicated. Upon completion of detoxification, offered 12 weeks of daily naltrexone plus medication management or 12 weekly sessions of Modified Behavioral Self-Control Therapy
AUD with chronic or complex presentation (AD-CMPLX)	Met DSM-5 criteria AUD, reported inpatient treatment for alcohol use and/or other mental health issues within last 5 years, experience social problems (ie, unstable housing) suggesting need for more intensive treatment, or deemed not appropriate for outpatient detoxification and in need higher level of care	Referred to specialty SUD treatment based on routine SBIRT protocol and ongoing monitoring by PCP

Abbreviations: SD, standard drinks.
[a]All received daily text message drinking tracking surveys.

Problem Drinkers (PD); (3) Alcohol Use Disorder with Physiological Withdrawal Drinkers (AD-W); or (4) Alcohol Use Disorder with Chronic or Complex Presentation (AD-CMPLX). Classifications were based on guidance from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), Substance Abuse and Mental Health Services Administration (SAMHSA), the American Society of Addiction Medicine (ASAM) Levels of Care, and our team's previous research.[40-42] A core element of the program was that services were integrated within the PCP and PCP providers monitored patients' progress during regular PCP visits. Other core elements included: daily text message drinking tracking surveys that took about 1-minute to complete, medication management using Naltrexone, and therapy sessions (Motivational Enhancement Therapy, Modified Behavioral Self-Control Therapy) as outlined in Table 1. Treatment options were based on risk stratification with increasing services as risk level increased. Patient preference regarding therapy versus medication management with Naltrexone, as appropriate, was the main driver of initial intervention for PD and AD-W patients. All participants were offered stepped-up care after discussion with the clinician about best options if they were deemed to be a treatment non-responder at their week 4 treatment appointment; participants also had a great deal of input and could choose a different treatment (eg, therapy instead of medication) in consultation with their treatment team at any point. Participants who chose behavioral interventions were able to select whether they wanted to attend these appointments in the PCP or via televideo. Participants were also able to choose whether abstinence or reducing/moderating drinking was their goal.

Specifically relevant to the data being examined in this paper, during the final assessment at study week 12, a research assistant administered a patient feedback interview, which consisted of semi-structured questions that took 15 to 20 minutes. These interviews were conducted mainly in person in the PCMH in a private room and patients received a $20 incentive for the entire final assessment. The research assistant (MR), a trained interviewer and master's-level mental health clinician took detailed notes during these interviews, and these notes made up the data for this study. IRB approval for this study was given by the Feinstein Institutes for Medical Research at Northwell Health Institutional Review Board.

Participants and Measures

Participants included 24 primary care patients (see Table 2). To address research question 1, we adapted questions from a previous qualitative study on barriers to SUD treatment.[43] These questions included: What is the main reason you agreed to be part of the program? Why did you feel that now was a good time to receive treatment? For research question 2 and 3, we adapted questions from a study on integrated medical and SUD treatment:[44] How would you describe

Table 2. Participant Demographics and Drinking Patterns.

	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %
	Men (n = 13)	Women (n = 11)	Total (n = 24)
Age	52.53 (14.01)	52.45 (19.24)	52.50 (16.23)
Male gender	100	0	54
Hispanic/Latino	31	27	29
Race			
Asian/Pacific Islander	23	0	13
Black	8	0	4
White	38	73	54
Other/multi-racial	31	27	29
Education			
Less than high school	8	9	8
High school or GED	38	9	26
Some college	23	46	33
Bachelor or graduate degree	31	36	33
Drinking classification			
At-risk	15	27	21
Problem drinking	8	64	33
Alcohol dependence-withdrawal	69	0	38
Alcohol dependence-complex	8	9	8
Baseline AUDIT[a] score	17.17 (6.32)	13.00 (5.39)	15.17 (6.14)
Baseline drinks per week	27.67 (19.64)	13.36 (4.65)	20.83 (16.00)

[a]AUDIT, alcohol use disorders identification test (range = 0-40; 8-14 = hazardous or harmful alcohol use; 15+ indicates the likelihood of alcohol use disorder).

your experience in the program? Did the program help reduce your drinking? What aspects of the program did you like the most? Least? The interview guide included probes to gain information about specific aspects of the program (eg, receiving alcohol treatment in their regular doctor's office).

Analysis

The coding team was made up of the first author (MO), a health services research scientist and PhD social psychologist with training in qualitative methods, and a research associate with a Master's in Public Health with qualitative research experience (CM). Both coders were not affiliated with the PCMH or health system in which the study took place. Atlas.ti was used to organize, manage, and examine the data. Conventional qualitative content analysis[45] was used to analyze the data following the process outlined in Erlingsson and Brysiewicz.[46] First, the coders read and re-read each interview to get a sense of the whole dataset and to document initial impressions. Second, the first author broke text down into meaning units, the smallest text unit that contains insights the researcher is interested.[47] Third, codes and definitions were developed into a codebook. Codes were developed inductively based on the team's initial read of the notes from all the interviews and open-coding of 3 interviews. Fourth, each interview was coded by both coders. The codebook was continually refined throughout the coding process through discussion and consensus; the coding team met weekly to discuss coding impressions, compare codes, and refine the codebook. Reliability between the 2 coders averaged 89%. Any coding disagreements were resolved through discussion. In the fifth and final step, once coding was completed, codes were sorted into categories.

Results

We identified 331 meaning units in the data. The meaning units were coded using 28 different codes that were organized into 7 categories (see Figure 1). In the results below, drinking classification of the participant is included with representative quotes.

What Were the Reasons Patients Participated in ReDUCE?

External factors. Patients cited a number of external factors that influenced their interest in engaging in ReDUCE. First, participants cited concerns from important others, such as family. For example, one participant engaged in the program to "ease concern from mother about drinking" (AR).

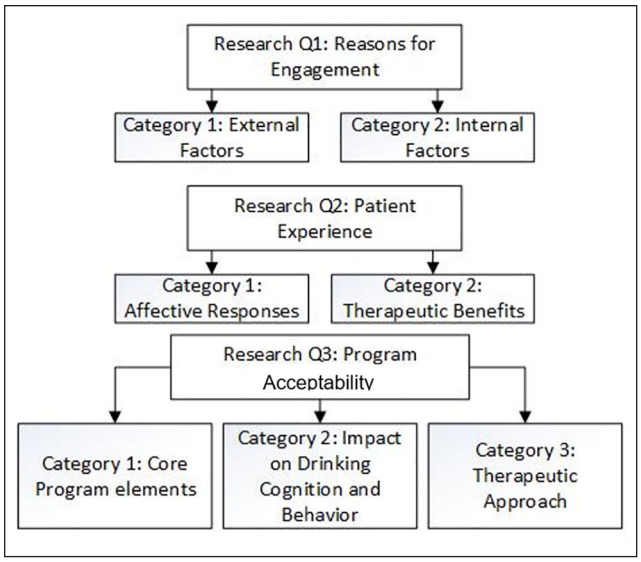

Figure 1. Qualitative categories.

Another participant said "family-daughter, wife, mother all worried" (AD-W).

Second, participants indicated that healthcare providers within the PCP weighed into their decision to engage. Patients suggested that their primary care physicians often connected their alcohol use to their health when suggesting the program. A patient said, I "came out of the hospital—doctor connected health issues to alcohol and ReDUCE presented itself, so wanted to go for it" (AR). And another patient said, "Dr. [x] presented it and suggested at recent visit because I was using drinking to relax and associated it with some health issues" (PD). Health coaches were also an influential provider within the PCP. One patient said, the "opportunity presented itself when the health coach came in during doctor visit" (AD-W). Another said, the "health coach approached me during visit in a caring, energetic way. The health coach did not sell the program, instead presented in a way that felt right place-right time" (AD-W). The program was often offered opportunistically during patients' regular doctor visit, which participants seemed to welcome. As a participant stated, "when this was offered during my visit I felt very happy" (PD). Another said that during their regular doctor visit the program "came my way, was honest with health coach about drinking" (PD).

Other external factors included affordability and the desire to help others. One participant said, I am participating "for my addiction, it's hard to find affordable rehab" (AD-W). Another said, I "can see it costing less to treat in primary care versus rehab" (PD). The desire to help others seemed to stem from participating in a research study that may eventually benefit others. One participated "to help self and to help others—we all benefit" (AD-CMPLX).

Internal factors. Internal factors also played into participants' decision to participate. First, participants' concerns about their own drinking as well as being in a stage in which they were already contemplating quitting or cutting down were key factors. For example, one participant said they were "drinking too much and worried it was going to get really out of control" (PD). Another said, I "needed the help. I have been saying 'How can I stop!' but felt hopeless—did not know how to stop" (PD).

A second internal factor was health concerns participants had connected to their drinking. Some had specific concerns due to a co-morbid chronic disease, while others had more general desires to become healthier or felt they needed to make changes because their future health was at risk. One participant said, "I felt I was reaching a point with my health. . .starting to feel really concerned about where I was going to go if I continued on that path" (AD-W). Another said they participated to "understand how drinking is bad for my health, especially diabetes—did not realize alcohol was bad for diabetes" (AR). An additional participant indicated, "I know it affects my health, it was time to make changes for my health, wanted to work on both drinking and eating" (AD-W).

What Were Patients' Experiences in ReDUCE?

Affective responses. Affective responses (ie, emotions, moods and feelings) to the program seemed to shape patients' experiences. For example, when asked about their experience the majority of patients had generally positive feelings, such as "enlightening!" (AD-CMPLX), "pleasant and fun" (AR), "glad I did this, really good experience" (PD), and "positive, no judgment, eye opening and empowering" (PD). Participants' feelings were also more specifically related to the flexibility of the program. For example, one patient said the program was "not a burden, [it was] accessible to fit into life" (PD). Another said, the program "felt structured but flexible" (PD). When participants did not have a positive experience, it was typically framed as a problem with specific patient fit. For example, a patient said the program was "supportive, pleasant, but not right for me" (AD-W). Another said their experience was, "not great, not for me" (PD).

Therapeutic benefits. Participants experienced therapeutic benefits from ReDUCE. First, participants reported gaining new insights and perspectives about their drinking. For example, one patient said "by sitting down and talking it out, I realized how much alcohol was permeating all areas of life" (PD). Another noted that it was "harder to reduce than anticipated, [the program] made me more aware and want to continue to try harder" (AR).

Second, participants also experienced feelings of support from program staff. For example, a patient said the

"health coach and therapist both used a compassionate, realistic approach and were exemplary; they delivered messages in a great way" (AD-W). Another patient said that the program was "easy going, no pressure, and I appreciated the support" (PD).

How Acceptable was ReDUCE to Patients?

Core program elements. Acceptability was driven by core program elements, such as daily text message tracking surveys, integration within the PCP, medication and therapy sessions. For example, the majority of participants found the daily text tracking survey helpful. One participant said, "text messages in the morning remind me not to drink" (AD-W). When participants did not drink, these seemed especially influential, as one participant noted they were a "huge help-I loved entering zeros" (AD-W). However, a few participants found these cumbersome or non-therapeutic. For example a participant said "daily was a little excessive and it was not user friendly" (AR). Another said the text surveys were "not helpful because they triggered thoughts to drink" (AD-W).

Other core program elements, such as its integration within the PCP and AUD medication, were related to acceptability. Many participants liked that the program was integrated into the PCP due to the convenience and affordability. One patient said that receiving alcohol care in their regular doctor's office made them able to "make appointments for diabetes and come in for alcohol treatment at the same time" (AD-W). Another said they liked receiving care in their regular doctor's office because they "didn't want to go to meetings or regular treatment" (AD-W). Negative comments related to integration in the PCP were typically related to transportation or scheduling difficulties due to patient personal circumstances.

Patients also discussed AUD medications and therapy, 2 other core program components. One patient said that medications "helped cut cravings and reduce [drinking]" (AD-W). Another said they "definitely liked being offered meds" (PD). Only 1 participant had a negative comment about the medications due to side effects, "medication made me feel weird, hazy, cloudy, including feeling down" (AD-W). Therapy was an important factor in patients' views on acceptability with the program and reactions to the therapy component were somewhat mixed. For example, 1 patient said "I was able to open up about my struggles" (PD). Another said, "talking about it and being open about it was 90% helpful" (AD-W). However, other patients were not as positive, perhaps because the therapy portion of the program was not what they expected in a setting like a PCP. For example, a patient said therapy "felt like buying time, treading water, sessions felt like nothing" and that there were "too few sessions in a sterile therapy environment—did not connect with the therapy techniques" (PD).

Impact on drinking cognition and behavior. Acceptability was also related to impacts on drinking cognition, such as gains in information or awareness. For example, a participant said, "I became more conscious of drinking in general. I began thinking about drinking differently after sessions and tracking more. I became more aware and this changed how I typically drink" (PD). Another participant said that the program was helpful because of it "making me self-aware of drinking over the course of the week—being conscious about drinking. Before this, I just drank, didn't think anything of it" (PD). Another participant said that they "realized they had strength within themselves to change" (PD). Several participants mentioned that receiving information about healthy drinking guidelines was useful. The majority of participants responded affirmatively when asked whether the program helped them reduce their drinking.

Therapeutic approach. Finally, acceptability with the program was influenced by the program's therapeutic approaches. One approach used in ReDUCE was being patient-centered by tailoring the program to patient needs and offering some patients a choice between medication and therapy. One patient said, I "liked having the choice, I was not locked into one versus the other, glad I chose therapy first and now considering medications" (AD-W). While another said, I "would not have done it if meds were mandatory" (PD). Flexible modalities (eg, telemedicine vs in-person) also contributed to the view of being patient-centered.

Another key therapeutic approach was offering the opportunity to cut down or moderate drinking rather than mandating abstinence-only goals. One participant said they, "definitely would not have joined if told to quit" (PD). Another agreed that it was "helpful to have the option to reduce, less rigid and easier to take on" (AD-W). Another said of this approach: "loved this—still working toward reducing and now want to quit" (AR). A few participants found this approach not structured enough, as 1 patient mentioned moderation was "not helpful, it enabled drinking when shouldn't have been" (AD-W).

Therapeutic alliances with providers were important to patient views of program acceptability. One patient noted that "meeting with the therapist and health coach kept me going; connection with staff chemistry—this is most important" (AD-CMPLX). Another participant noted that "meeting with [health coach and therapist] was very helpful; was not talking with anyone and finally opened up about drinking" (PD). Another patient stated that interacting with the staff was "very supportive, comfortable—appreciated staff and what was trying to be done" (AD-W).

Discussion

In this study, we examined perspectives and experiences of patients who participated in an integrated care program for

UAU within a PCP by focusing on reasons for participation as well as perceived acceptability of the program. Generally, we found that participants found the program acceptable and that they felt it helped them decrease their drinking due to the core elements of the program, perceived cognitive and behavioral improvements, and therapeutic approaches utilized. Patients experienced affective and therapeutic benefits and we found that patients initially engaged in the program for both internal and external reasons.

Internal factors such as concern for health and external influences such as family or healthcare practitioner concern contributed to patients' interest in engaging in the program. Findings related to health concerns and pressure from family members are supported by previous qualitative research on older adults' perspectives on alcohol treatment in PCPs.[48] However, what our study highlights that other studies have not is the importance of the PCP provider in encouraging participants to engage in alcohol-related care, especially during routine PCP visits. By framing the conversation with patients as one about health, PCPs implementing AUD care programs could successfully engage patients into integrated programs. PCP providers should receive training on the linkages between alcohol and health and understand the importance of their role as well as the importance of family members in encouraging patients to engage in care. Offering a program opportunistically during routine medical visits can be both an important aspect of care and a challenge given that patients with UAU may not be aware of the problem or ready to address it. Multiple touchpoints with PCP providers may be required to fully engage patients; however, this repeated engagement is especially well suited to the ongoing relationship between PCP physicians and their patients. Future research should examine the touchpoints needed to fully engage patients as well as provider experiences in this ongoing engagement.

In SUD treatment broadly, patient satisfaction and acceptability has been linked to improved patient retention and outcomes.[49-51] Findings from this study suggested acceptability was generally high and that it was affected by 3 main factors: elements of the multi-faceted program, impact on drinking behavior and cognition, and therapuetic approaches employed in this program.

The ReDUCE program offered a variety of elements integrated into the PCP (daily drinking tracking surveys, therapy, medication) and patients seemed to weigh the importance of each of these depending on their individual needs, goals, and current drinking pattern. Related specifically to AUD medication, previous research suggests that patients generally appreciate having the option to discuss medication with PCPs,[52] but that they may need multiple therapy sessions prior to initiating.[9] This was reflected by some patients in this study who said they would not have participated if medication was the only option or that they were considering medications only after receiving therapy. Further, a few patients did not find the daily text message drinking tracking surveys helpful because they felt they potentially triggered thoughts to drink or were exessive. Others responded positively because the messages served as a reminder to not drink or were positvely reinforcing when patients were able to enter zeros. Given the large interest in technology-based care for alcohol and other substance use[53,54] and in particular text-messaging interventions,[55] further studies should examine patient experience and implementation of such technology in primary care and other healthcare settings. Similarly, not all patients felt that the therapy component was helpful for them or what they were expecting. Ensuring that patients fully understand therapy goals and what to expect may improve acceptability. Additional research should clarify patient expectations about behavioral health therapy within PCPs. Overall, our findings suggest that a rigid, one-size fits all program may not be attractive to patients. Therefore, it may be important in PCP-based integrated programs to offer a flexible menu of options to patients and recognize that patient preference could change over the course of their treatment.

The program's therapeutic approach also influenced acceptability. First, being patient-centered was valued, including allowing patients to explore the menu of options available to them given their individual preferences and needs, providing flexibility in terms of interaction with program staff (eg, telehealth), and choice of moderation vs. abstinence goal. Patient-centered care is a key element of SUD treatment and has been found to improve patient outcomes,[56,57] and previous research has found that patients value being involved in decisions about their treatment and having autonomy.[25] Therefore, programs should include training and support to program staff on providing patient-centered care. Second, therapeutic alliance between patient and provider was mentioned frequently by patients when discussing acceptability as well as engagement and experience in the program. Therapuetic alliance has long been an important predictor of outcomes in AUD care.[58-60] Previous quantitative research has found that patients have more positive attitudes toward alcohol-related interventions in PCPs if they are generally satisfied with their PCP provider.[61] Qualitative research also highlights the importance of the patient-provider relationship in helping patients address their alcohol use in the PCP setting.[62] The importance of supportive providers who are comfortable providing AUD care in PCPs cannot be underestimated. Future research on AUD programs in PCPs would benefit from a mixed-methods examination of patient experience, therapuetic alliance, and drinking outcomes to further understand these dynamics. Patients also discussed acceptability in terms of receiving important information and tools that increased their awareness about the impacts of their drinking. This finding is supported by previous research in AUD specialty care that patients felt being offered advice, tools, and resources

improved their motivation to change their drinking and extends this finding to PCP settings.[25] Therefore, PCP providers must be equipped with information and tools to assist patients in achieving their drinking goals.

We did not find any high-level differences between men and women or between drinking classification groups. However, it should be noted that there was not an even distribution of men and women within the drinking classification groups. Further, men reported higher weekly drinking levels and AUDIT scores at baseline than women. Given the small sample size, we were not able to fully explore gender and drinking classification differences in experience and engagement in treatment services for UAU in primary care; future research should examine this.

While there were important findings related to patient engagement, experience, and acceptability, there are limitations. At the PCP's request, we did not audio record interviews due to their concerns that recording was not part of standard practice in the PCP and that it may cause too much discomfort for patients given that this was the patient's regular PCP. As a result, important context or information may not have been captured in our findings. To balance the ethical commitment to participants and the PCP and methodological rigor, the interviewer took detailed notes mainly by writing down direct quotes from participants. It is possible the interviewer missed words from some of the quotes, reflecting notes rather than full direct quotes. While audio recording and transcribing is a suggested practice to support reliablity in qualitative research, some studies have justified that audio recording can negatively impact the quality of interviews and have shown that note-taking can be rigorous as well.[63-66] In addition, the interviewer served as one of several part-time health coaches in the PCMH where the study was conducted. Therefore, she may have known some of the participants prior to the study in this role, leading to the possiblity that this introduced bias into the interviews. However, she was a trained interviewer and research assistant who was aware of and made efforts to minimize this potential bias. This study was conducted among patients who agreed to participate in the program and consented to study data collection, it does not provide insight into why people chose not to participate or barriers to engagement outside of a research study.

There were also strengths in that we took several measures to demonstrate study trustworthiness.[47] For example, 2 people coded each transcript. A detailed codebook was maintained and all decisions and activities throughout the analysis were carefully documented using an audit trail. While we did not return the interview notes or findings to participants to review, the interviewer, who did not take part in the coding and analysis, was presented with the results during analysis to ensure that we captured patient's thoughts accurately. Finally, we included all patients who participated in the ReDUCE feasibility study in the qualitative interview portion of the study, rather than a sub-sample.

The findings of this study illuminate factors important in reaching patients in AUD care programs integrated in PCPs as well as factors that may influence patient experience and acceptability. One recurring theme was the importance of PCP providers in both engaging patients as well as providing support and building a therapuetic alliance. In addition, offering flexible and comprehensive programs with mutiple elements and both abstinence and moderation goals could improve patient acceptability in AUD care programs in PCPs. PCPs will need to be thoughtful about the resources needed to implement programs in terms of staffing, training, and support.

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ORCID iD

Megan A. O'Grady https://orcid.org/0000-0002-1121-734X

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